SEQUENCE LISTING

<110> Wisniewski, Thomas
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      Goni, Fernando

<120> MUCOSAL IMMUNIZATION TO PREVENT PRION INFECTION

<130> 200M536-WO0

<160> 32

<170> PatentIn version 3.1

<210> 1
<211> 253
<212> PRT
<213> Homo sapiens

<400> 1

Met Ala Asn Leu Gly Cys Trp Met Leu Val Leu Phe Val Ala Thr Trp
1   5   10   15

Ser Asp Leu Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly Trp Asn
            20   25   30

Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly Gly Asn Arg
        35   40   45

Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
    50   55   60

Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
65   70   75   80

Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly Gly Thr His
                85   90   95

Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Met
            100   105   110

Ala Gly Ala Ala Ala Ala Gly Ala Val Val Gly Gly Leu Gly Gly Tyr
            115   120   125

Met Leu Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser Asp
    130   135   140

1

```
Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met His Arg Tyr Pro Asn Gln
145             150             155             160

Val Tyr Tyr Arg Pro Met Asp Glu Tyr Ser Asn Gln Asn Asn Phe Val
            165             170             175

His Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr Thr
            180             185             190

Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg
        195             200             205

Val Val Glu Gln Met Cys Ile Thr Gln Tyr Glu Arg Glu Ser Gln Ala
210             215             220

Tyr Tyr Gln Arg Gly Ser Ser Met Val Leu Phe Ser Ser Pro Pro Val
225             230             235             240

Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
            245             250
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<210>  2
<211>  264
<212>  PRT
<213>  Bovine

<400>  2
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```
Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala
1               5               10              15

Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
            20              25              30

Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
        35              40              45

Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Trp Gly Gln Pro His
    50              55              60

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65              70              75              80

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
```

                        85   90   95

Gly Gly Gly Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys
            100   105   110

Pro Ser Lys Pro Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala
            115   120   125

Ala Gly Ala Val Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala
    130   135   140

Met Ser Arg Pro Leu Ile His Phe Gly Ser Asp Tyr Glu Asp Arg Tyr
145   150   155   160

Tyr Arg Glu Asn Met His Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro
                165   170   175

Val Asp Gln Tyr Ser Asn Gln Asn Asn Phe Val His Asp Cys Val Asn
            180   185   190

Ile Thr Val Lys Glu His Thr Val Thr Thr Thr Lys Gly Glu Asn
            195   200   205

Phe Thr Glu·Thr Asp Ile Lys Met Met Glu Arg Val Val Glu Gln Met
    210   215   220

Cys Ile Thr Gln Tyr Gln Arg Glu Ser Gln Ala Tyr Tyr Gln Arg Gly
225   230   235   240

Ala Ser Val Ile Leu Phe Ser Ser Pro Pro Val Ile Leu Leu Ile Ser
                245   250   255

Phe Leu Ile Phe Leu Ile Val Gly
            260

<210> 3
<211> 256
<212> PRT
<213> Deer

<400> 3

Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala
1   5   10   15

Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
        20   25   30

Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
        35   40   45

Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His
    50   55   60

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65   70   75   80

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly
                85   90   95

Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met
            100   105   110

Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Val Gly Gly Leu
        115   120   125

Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe
    130   135   140

Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr
145   150   155   160

Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr Asn Asn Gln Asn
                165   170   175

Thr Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr Val
            180   185   190

Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Ile Lys Met
        195   200   205

Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Arg Glu
    210   215   220

Ser Glu Ala Tyr Tyr Gln Arg Gly Ala Ser Val Ile Leu Phe Ser Ser
225   230   235   240

4

```
Pro Pro Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
                 245             250             255
```

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<210>  4
<211>  256
<212>  PRT
<213>  Elk

<400>  4
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```
Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala
1               5               10              15
```

```
Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
            20              25              30
```

```
Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
        35              40              45
```

```
Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His
    50              55              60
```

```
Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65              70              75              80
```

```
Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly
                85              90              95
```

```
Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met
            100             105             110
```

```
Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Val Gly Gly Leu
        115             120             125
```

```
Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe
    130             135             140
```

```
Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr
145             150             155             160
```

```
Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr Asn Asn Gln Asn
            165             170             175
```

```
Thr Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr Val
            180             185             190
```

```
Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Ile Lys Met
        195             200             205

Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Arg Glu
    210             215             220

Ser Glu Ala Tyr Tyr Gln Arg Gly Ala Ser Val Ile Leu Phe Ser Ser
225             230             235             240

Pro Pro Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
            245             250             255
```

<210> 5
<211> 256
<212> PRT
<213> Odocoileus hemionus

<400> 5

```
Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala
1               5               10              15

Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
            20              25              30

Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
        35              40              45

Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His
    50              55              60

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65              70              75              80

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly
            85              90              95

Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met
        100             105             110

Lys His Val Ala Gly Ala Ala Ala Ala Gly Ala Val Val Gly Gly Leu
        115             120             125
```

Gly Gly Tyr Met Leu Gly Ser Ala Met Asn Arg Pro Leu Ile His Phe
    130   135   140

Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr
145   150   155   160

Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr Asn Asn Gln Asn
            165   170   175

Thr Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr Val
            180   185   190

Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Ile Lys Met
        195   200   205

Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Arg Glu
    210   215   220

Ser Gln Ala Tyr Tyr Gln Arg Gly Ala Ser Val Ile Leu Phe Ser Ser
225   230   235   240

Pro Pro Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
            245   250   255

<210> 6
<211> 254
<212> PRT
<213> Mus musculus

<400> 6

Met Ala Asn Leu Gly Tyr Trp Leu Leu Ala Leu Phe Val Thr Met Trp
1   5   10   15

Thr Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly Trp Asn
            20   25   30

Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly Gly Asn Arg
        35   40   45

Tyr Pro Pro Gln Gly Gly Thr Trp Gly Gln Pro His Gly Gly Gly Trp
    50   55   60

Gly Gln Pro His Gly Gly Ser Trp Gly Gln Pro Pro Gly Gly Ser Trp
65   70   75   80

7

```
Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly Gly Thr His Asn
                85              90              95

Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Leu Lys His Val Ala
            100             105             110

Gly Ala Ala Ala Ala Gly Ala Val Val Gly Gly Leu Gly Gly Tyr Met
            115             120             125

Leu Gly Ser Ala Met Ser Arg Pro Met Ile His Phe Gly Asn Asp Trp
    130             135             140

Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr Pro Asn Gln Val
145             150             155             160

Tyr Tyr Arg Pro Val Asp Gln Tyr Ser Asn Gln Asn Asn Phe Val His
            165             170             175

Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr Thr Thr
            180             185             190

Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg Val
    195             200             205

Val Glu Gln Met Cys Val Thr Gln Tyr Gln Lys Glu Ser Asp Ala Tyr
210             215             220

Tyr Asp Gly Arg Arg Ser Ser Ser Thr Val Leu Phe Ser Ser Pro Pro
225             230             235             240

Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
            245             250
```

<210> 7
<211> 225
<212> PRT
<213> Rattus norvegicus

<400> 7

```
Gly Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro
1               5               10              15
```

8

```
Gly Gly Asn Arg Tyr Pro Pro Gln Ser Gly Gly Thr Trp Gly Gln Pro
            20              25                  30

His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro
        35              40                  45    .

His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Ser Gln Gly
    50              55                  60

Gly Gly Thr His Asn Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn
65              70              75                  80

Leu Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Val Gly Gly
                85              90                  95

Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Met Leu His
            100             105             110

Phe Gly Asn Asp Trp Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg
        115             120             125

Tyr Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr Ser Asn Gln
    130             135             140

Asn Asn Phe Val His Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr
145             150             155             160

Val Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys
            165             170             175

Met Met Glu Arg Val Val Glu Gln Met Cys Val Thr Gln Tyr Gln Lys
        180             185             190

Glu Ser Gln Ala Tyr Tyr Asp Gly Arg Arg Ser Ser Ala Val Leu Phe
    195             200             205

Ser Ser Pro Pro Val Ile Leu Leu Ile Ser Leu Ile Phe Leu Ile Val
    210             215             220

Gly
225
```

`<210>  8`

9

```
<211>    256
<212>    PRT
<213>    Sheep

<400>    8
```

Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala
1   5   10   15

Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
                20   25   30

Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
            35   40   45

Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His
        50   55   60

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65   70   75   80

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly
                85   90   95

Gly Ser His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met
            100   105   110

Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Val Gly Gly Leu
            115   120   125

Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe
        130   135   140

Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr
145   150   155   160

Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Arg Tyr Ser Asn Gln Asn
                165   170   175

Asn Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr Val
                180   185   190

Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Ile Lys Ile
            195   200   205

```
Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Arg Glu
    210                 215                 220

Ser Gln Ala Tyr Tyr Gln Arg Gly Ala Ser Val Ile Leu Phe Ser Ser
225        `        230                  ·235    ··  - · ·     240

Pro Pro Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
            245                 250                 255
```

```
<210>  9
<211>  256
<212>  PRT
<213>  Goat

<400>  9
```

```
Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala
1               5                   10                  15

Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
            20              ·    25          ·       30

Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
        35                  40                  45

Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His
    50                  55                  60

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65                  70                  75                  80

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly
                85                  90                  95

Gly Ser His Ser Asp Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met
            100     .           105             110

Lys His Val Ala Gly Ala Ala Ala Ala Gly Ala Val Val Gly Gly Leu
            115             120             125

Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe
    130             135             140

Gly His Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr
```

```
145                    150                    155                    160
```

```
Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr Ser His Gln Asn
                165                    170                    175
```

```
Asn Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr Val
                180                    185                    190
```

```
Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Ile Lys Ile
            195                    200                    205
```

```
Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Arg Glu
        210                    215                    220
```

```
Ser Gln Ala Tyr Tyr Gln Arg Gly Ala Ser Val Ile Leu Phe Ser Pro
225                    230                    235                    240
```

```
Pro Pro Val Ile Leu Leu Ile Ser Leu Leu Ile Leu Leu Ile Val Gly
                245                    250                    255
```

```
<210>  10
<211>  254
<212>  PRT
<213>  Syrian hamster
```

```
<400>  10
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```
Met Ala Asn Leu Ser Tyr Trp Leu Leu Ala Leu Phe Val Ala Met Trp
1               5                   10                  15
```

```
Thr Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly Trp Asn
            20                  25                  30
```

```
Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly Gly Asn Arg
            35                  40                  45
```

```
Tyr Pro Pro Gln Gly Gly Gly Thr Trp Gly Gln Pro His Gly Gly Gly
    50                  55                  60
```

```
Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
65                  70                  75                  80
```

```
Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly Gly Thr His
                85                  90                  95
```

```
Asn Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Met
            100             105             110

Ala Gly Ala Ala Ala Ala Gly Ala Val Val Gly Gly Leu Gly Gly Tyr
            115             120             125

Met Leu Gly Ser Ala Met Ser Arg Pro Met Met His Phe Gly Asn Asp
            130             135             140

Trp Glu Asp Arg Tyr Tyr Arg Glu Asn Met Asn Arg Tyr Pro Asn Gln
145             150             155             160

Val Tyr Tyr Arg Pro Val Asp Gln Tyr Asn Asn Gln Asn Asn Phe Val
            165             170             175

His Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr Tyr
            180             185             190

Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Ile Lys Ile Met Glu Arg
            195             200             205

Val Val Glu Gln Met Cys Thr Thr Gln Tyr Gln Lys Glu Ser Gln Ala
210             215             220

Tyr Tyr Asp Gly Arg Arg Ser Ser Ala Val Leu Phe Ser Ser Pro Pro
225             230             235             240

Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Met Val Gly
            245             250
```

```
<210>    11
<211>    258
<212>    PRT
<213>    Mink

<400>    11
```

```
Met Val Lys Ser His Ile Gly Ser Trp Leu Leu Val Leu Phe Val Ala
1               5               10              15

Thr Trp Ser Asp Ile Gly Phe Cys Lys Lys Arg Pro Lys Pro Gly Gly
            20              25              30

Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
```

```
                   35                      40                      45

    Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Trp Gly Gln Pro His
         50                  55                  60


    Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
    65                  70                  75                  80


    Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly
                    85                  90                  95


    Gly Gly Ser His Gly Gln Trp Gly Lys Pro Ser Lys Pro Lys Thr Asn
                    100                 105                 110


    Met Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Val Gly Gly
             115                 120                 125


    Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Leu Ile His
         130                 135                 140


    Phe Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg
    145                 150                 155                 160


    Tyr Pro Asn Gln Val Tyr Tyr Lys Pro Val Asp Gln Tyr Ser Asn Gln
                    165                 170                 175


    Asn Asn Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr
                    180                 185                 190


    Val Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Met Lys
             195                 200                 205


    Ile Met Glu Arg Val Val Glu Gln Met Cys Val Thr Gln Tyr Gln Arg
         210                 215                 220


    Glu Ser Glu Ala Ala Tyr Tyr Gln Arg Gly Ala Ser Ala Ile Leu Phe
    225                 230                 235                 240


    Ser Pro Pro Pro Val Ile Leu Leu Ile Ser Leu Leu Ile Leu Leu Ile
                    245                 250                 255


    Val Gly
```

14

```
<210>  12
<211>  253
<212>  PRT
<213>  Gorilla

<400>  12

Met Ala Asn Leu Gly Cys Trp Met Leu Val Leu Phe Val Ala Thr Trp
1               5                   10                  15


Ser Asp Leu Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly Trp Asn
            20                  25                  30


Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly Gly Asn Arg
        35                  40                  45


Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
    50                  55                  60


Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
65                  70                  75                  80


Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly Gly Thr His
                85                  90                  95


Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Met
            100                 105                 110


Ala Gly Ala Ala Ala Ala Gly Ala Val Val Gly Gly Leu Gly Gly Tyr
            115                 120                 125


Met Leu Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser Asp
    130                 135                 140


Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met His Arg Tyr Pro Asn Gln
145                 150                 155                 160


Val Tyr Tyr Arg Pro Met Asp Gln Tyr Ser Asn Gln Asn Asn Phe Val
                165                 170                 175


His Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr Thr
                180                 185                 190
```

```
Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg
        195             200             205

Val Val Glu Gln Met Cys Ile Thr Gln Tyr Glu Arg Glu Ser Gln Ala
210             215             220

Tyr Tyr Gln Arg Gly Ser Ser Met Val Leu Phe Ser Ser Pro Pro Val
225             230             235             240

Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
            245             250
```

```
<210>    13
<211>    254
<212>    PRT
<213>    Chimpanzee

<400>    13
```

```
Met Ala Asn Leu Gly Cys Trp Met Leu Val Leu Phe Val Ala Thr Trp
1               5               10              15

Ser Asp Leu Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly Trp Asn
        20              25              30

Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly Gly Asn Arg
        35              40              45

Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
    50              55              60

Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
65              70              75              80

Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly Gly Thr His
            85              90              95

Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Met
            100             105             110

Ala Gly Ala Ala Ala Ala Gly Ala Val Val Gly Gly Leu Gly Gly Tyr
        115             120             125

Met Leu Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser Asp
    130             135             140
```

16

```
Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met His Arg Tyr Pro Asn Gln
145             150             155             160


Val Tyr Tyr Arg Pro Met Asp Gln Tyr Ser Ser Gln Asn Asn Phe Val
                165             170             175


His Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr Thr
            180             185             190


Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg
        195             200             205


Val Val Glu Gln Met Cys Ile Thr Gln Tyr Glu Arg Glu Ser Gln Ala
    210             215             220


Tyr Tyr Gln Arg Gly Ser Ser Met Val Leu Phe Ser Ser Pro Pro Val
225             230             235             240


Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Leu Ile Val Gly
            245             250
```

```
<210>  14
<211>  263
<212>  PRT
<213>  Greater kudu

<400>  14
```

```
Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala
1               5               10              15


Met Trp Ser Asp Val Ala Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
            20              25              30


Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
        35              40              45


Gly Asn Arg Tyr Pro Ser Gln Gly Gly Gly Gly Trp Gly Gln Pro His
    50              55              60


Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65              70              75              80
```

```
Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
            85              90              95
```

```
Gly Gly Gly Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys
            100             105             110
```

```
Pro Ser Lys Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala Ala
        115             120             125
```

```
Gly Ala Val Val Gly Gly Leu Gly Gly Tyr Met Leu Gly Ser Ala Met
    130             135             140
```

```
Ser Arg Pro Leu Ile His Phe Gly Ser Asp Tyr Glu Asp Arg Tyr Tyr
145             150             155             160
```

```
Arg Glu Asn Met Tyr Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro Val
            165             170             175
```

```
Asp Gln Tyr Ser Asn Gln Asn Asn Phe Val His Asp Val Asn Asn Ile
            180             185             190
```

```
Thr Val Lys Gln His Thr Val Thr Thr Thr Lys Gly Glu Asn Phe
        195             200             205
```

```
Thr Glu Thr Asp Ile Lys Met Met Glu Arg Val Val Glu Gln Met Cys
    210             215             220
```

```
Ile Thr Gln Tyr Gln Arg Glu Ser Glu Ala Tyr Tyr Gln Arg Gly Ala
225             230             235             240
```

```
Ser Val Ile Leu Phe Ser Ser Pro Pro Val Ile Leu Leu Ile Ser Phe
            245             250             255
```

```
Leu Ile Phe Leu Ile Val Gly
            260
```

```
<210>   15
<211>   255
<212>   PRT
<213>   Camel

<400>   15

Met Val Lys Ser His Met Gly Ser Trp Ile Leu Val Leu Phe Val Val
1               5               10              15
```

Thr Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
            20   25   30

Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
        35   40   45

Gly Tyr Arg Tyr Pro Pro Gln Gly Gly Gly Trp Gly Gln Pro His
        50   55   60

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65   70   75   80

Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly
                85   90   95

Gly Ala His Gly Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Ser Met
            100   105   110

Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Val Gly Gly Leu
        115   120   125

Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe
    130   135   140

Gly Asn Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met Tyr Arg Tyr
145   150   155   160

Pro Asn Gln Val Tyr Tyr Lys Pro Val Asp Gln Tyr Ser Asn Gln Asn
            165   170   175

Ser Phe Val His Asp Cys Val Asn Ile Thr Val Lys Gln His Thr Val
            180   185   190

Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys Met
    195   200   205

Met Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Arg Glu
    210   215   220

Tyr Gln Ala Ser Tyr Gly Arg Gly Ala Ser Val Ile Phe Ser Ser Pro
225   230   235   240

```
Pro Val Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
              245              250                   255


<210>  16
<211>  257
<212>  PRT
<213>  Pig

<400>  16

Met Val Lys Ser His Ile Gly Gly Trp Ile Leu Val Leu Phe Val Ala
1               5                   10                  15


Ala Trp Ser Asp Ile Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
            20              25              30


Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
        35              40              45


Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His
    50              55              60


Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65                  70              75                  80


Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly
                85              90                  95


Gly Gly Ser His Gly Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn
            100             105             110


Met Lys His Val Ala Gly Ala Ala Ala Gly Ala Val Val Gly Gly
        115             120             125


Leu Gly Gly Tyr Met Leu Gly Ser Ala Met Ser Arg Pro Leu Ile His
    130             135             140


Phe Gly Ser Asp Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met His Arg
145             150             155             160


Tyr Pro Asn Gln Val Tyr Tyr Arg Pro Val Asp Gln Tyr Ser Asn Gln
            165             170             175


Asn Ser Phe Val His Asp Cys Val Asn Ile Thr Val Lys Glu His Thr
```

20

```
                    180                     185                     190


Val Thr Thr Thr Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys
        195                 200                 205


Met Ile Glu Arg Val Val Glu Gln Met Cys Ile Thr Gln Tyr Gln Lys
    210                 215                 220


Glu Tyr Glu Ala Tyr Ala Gln Arg Gly Ala Ser Val Ile Leu Phe Ser
225                 230                 235                 240


Ser Pro Pro Val Ile Leu Leu Ile Ser Phe Leu Leu Phe Leu Ile Val
                245                 250                 255


Gly


<210>   17
<211>   253
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   homolog of full-length human prion

<220>
<221>   MISC_FEATURE
<222>   (1)..(253)
<223>   where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly or
        Ser


<400>   17

Met Ala Asn Leu Gly Cys Trp Met Leu Val Leu Phe Val Ala Thr Trp
1               5               10                  15


Ser Asp Leu Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly Trp Asn
            20              25              30


Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly Gly Asn Arg
        35              40              45


Tyr Pro Pro Gln Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
    50              55              60


Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly
```

```
    65                      70                     75                      80
```

Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Gly Gly Thr His
                85   90   95

Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Met
               100   105   110

Ala Gly Ala Ala Ala Ala Gly Ala Xaa Xaa Xaa Gly Gly Leu Gly Gly
            115   120   125

Xaa Xaa Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser Asp
    130   135   140

Tyr Glu Asp Arg Tyr Tyr Arg Glu Asn Met His Arg Tyr Pro Asn Gln
145   150   155   160

Val Tyr Tyr Arg Pro Met Asp Glu Tyr Ser Asn Gln Asn Asn Phe Val
            165   170   175

His Asp Cys Val Asn Ile Thr Ile Lys Gln His Thr Val Thr Thr Thr
            180   185   190

Thr Lys Gly Glu Asn Phe Thr Glu Thr Asp Val Lys Met Met Glu Arg
            195   200   205

Val Val Glu Gln Met Cys Ile Thr Gln Tyr Glu Arg Glu Ser Gln Ala
    210   215   220

Tyr Tyr Gln Arg Gly Ser Ser Met Val Leu Phe Ser Ser Pro Pro Val
225   230   235   240

Ile Leu Leu Ile Ser Phe Leu Ile Phe Leu Ile Val Gly
            245   250

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<210>   18
<211>   264
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   homolog of bovine full-length prion

<220>
<221>   MISC_FEATURE
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<222>   (1)..(264)
<223>   where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or
        Ser


<400>   18

Met Val Lys Ser His Ile Gly Ser Trp Ile Leu Val Leu Phe Val Ala
1               5                   10                  15


Met Trp Ser Asp Val Gly Leu Cys Lys Lys Arg Pro Lys Pro Gly Gly
                20                  25                  30


Gly Trp Asn Thr Gly Gly Ser Arg Tyr Pro Gly Gln Gly Ser Pro Gly
            35                  40                  45


Gly Asn Arg Tyr Pro Pro Gln Gly Gly Gly Gly Trp Gly Gln Pro His
        50                  55                  60


Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
65                  70                  75                  80


Gly Gly Gly Trp Gly Gln Pro His Gly Gly Gly Trp Gly Gln Pro His
                85                  90                  95


Gly Gly Gly Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys
                100                 105                 110


Pro Ser Lys Pro Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala
            115                 120                 125


Ala Gly Ala Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala
        130                 135                 140


Met Ser Arg Pro Leu Ile His Phe Gly Ser Asp Tyr Glu Asp Arg Tyr
145                 150                 155                 160


Tyr Arg Glu Asn Met His Arg Tyr Pro Asn Gln Val Tyr Tyr Arg Pro
                165                 170                 175


Val Asp Gln Tyr Ser Asn Gln Asn Asn Phe Val His Asp Cys Val Asn
                180                 185                 190


Ile Thr Val Lys Glu His Thr Val Thr Thr Thr Lys Gly Glu Asn
                195                 200                 205
```

```
Phe Thr Glu Thr Asp Ile Lys Met Met Glu Arg Val Val Glu Gln Met
    210                 215                 220

Cys Ile Thr Gln Tyr Gln Arg Glu Ser Gln Ala Tyr Tyr Gln Arg Gly
225                 230                 235             240

Ala Ser Val Ile Leu Phe Ser Ser Pro Pro Val Ile Leu Leu Ile Ser
                245                 250                 255

Phe Leu Ile Phe Leu Ile Val Gly
                260
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<210>  19
<211>  65
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  homolog of fragment of human prion

<220>
<221>  MISC_FEATURE
<222>  (1)..(10)
<223>  where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
       idues

<220>
<221>  MISC_FEATURE
<222>  (42)..(51)
<223>  where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or
       Ser

<400>  19
```

```
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gln Gly Gly Gly Thr
1               5                   10                  15

His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His
                20                  25                  30

Met Ala Gly Ala Ala Ala Ala Gly Ala Xaa Xaa Gly Gly Leu Gly Gly
        35                  40                  45

Xaa Xaa Xaa Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser
    50                  55                  60
```

24

Asp
65

<210>   20
<211>   120
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   homolog of fragment of human prion

<220>
<221>   MISC_FEATURE
<222>   (1)..(10)
<223>   where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
        idues

<220>
<221>   MISC_FEATURE
<222>   (42)..(106)
<223>   where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or
        Ser

<400>   20

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gln Gly Gly Gly Thr
1   5   10   15

His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His
            20   25   30

Met Ala Gly Ala Ala Ala Ala Gly Ala Xaa Xaa Gly Gly Leu Gly Gly
        35   40   45

Xaa Xaa Xaa Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser
    50   55   60

Asp Gly Gln Gly Gly Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys
65   70   75   80

Pro Lys Thr Asn Met Lys His Met Ala Gly Ala Ala Ala Ala Gly Ala
                85   90   95

Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser Arg
            100   105   110

Pro Ile Ile His Phe Gly Ser Asp
            115   120

<210> 21
<211> 65
<212> PRT
<213> Artificial Sequence

<220>
<223> homolog of fragment of human prion

<220>
<221> MISC_FEATURE
<222> (32)..(41)
<223> where Xaa is Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or Ser

<220>
<221> MISC_FEATURE
<222> (56)..(65)
<223> where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
       idues

<400> 21

Gly Gln Gly Gly Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys Pro
1   5   10   15

Lys Thr Asn Met Lys His Met Ala Gly Ala Ala Ala Gly Ala Xaa
            20   25   30

Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser Arg Pro
        35   40   45

Ile Ile His Phe Gly Ser Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
    50   55   60

Xaa
65

<210> 22
<211> 120
<212> PRT
<213> Artificial Sequence

<220>
<223> homolog of fragment of human prion

<220>
<221> MISC_FEATURE

<222>   (32)..(96)
<223>   where Xaa is Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or Ser

<220>
<221>   MISC_FEATURE
<222>   (111)..(120)
<223>   where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
         idues

<400>   22

Gly Gln Gly Gly Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys Pro
1   5   10   15

Lys Thr Asn Met Lys His Met Ala Gly Ala Ala Ala Gly Ala Xaa
            20   25   30

Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser Arg Pro
        35   40   45

Ile Ile His Phe Gly Ser Asp Gly Gln Gly Gly Gly Thr His Ser Gln
        50   55   60

Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Met Ala Gly
65   70   75   80

Ala Ala Ala Ala Gly Ala Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa
            85   90   95

Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser Asp Xaa Xaa
            100   105   110

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
        115   120

<210>   23
<211>   75
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   homolog of fragment of human prion

<220>
<221>   MISC_FEATURE
<222>   (1)..(10)
<223>   where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res

idues

<220>
<221> MISC_FEATURE
<222> (42)..(51)
<223> where Xaa is Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or Ser

<220>
<221> MISC_FEATURE
<222> (66)..(75)
<223> where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
      idues

<400> 23

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gln Gly Gly Gly Thr
1   5   10   15

His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His
            20   25   30

Met Ala Gly Ala Ala Ala Ala Gly Ala Xaa Xaa Gly Gly Leu Gly Gly
        35   40   45

Xaa Xaa Xaa Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser
    50   55   60

Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65   70   75

<210> 24
<211> 130
<212> PRT
<213> Artificial Sequence

<220>
<223> homolog of fragment of human prion

<220>
<221> MISC_FEATURE
<222> (1)..(10)
<223> where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
      idues

<220>
<221> MISC_FEATURE
<222> (42)..(106)
<223> where Xaa is Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or Ser

```
<220>
<221>  MISC_FEATURE
<222>  (121)..(130)
<223>  where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
       idues


<400>  24

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gln Gly Gly Gly Thr
1               5                   10                  15


His Ser Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His
            20                  25                  30


Met Ala Gly Ala Ala Ala Ala Gly Ala Xaa Xaa Gly Gly Leu Gly Gly
        35                  40                  45


Xaa Xaa Xaa Gly Ser Ala Met Ser Arg Pro Ile Ile His Phe Gly Ser
    50                  55                  60


Asp Gly Gln Gly Gly Gly Thr His Ser Gln Trp Asn Lys Pro Ser Lys
65                  70                  75                  80


Pro Lys Thr Asn Met Lys His Met Ala Gly Ala Ala Ala Ala Gly Ala
                85                  90                  95


Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser Arg
            100                 105                 110


Pro Ile Ile His Phe Gly Ser Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
        115                 120                 125


Xaa Xaa
    130


<210>  25
<211>  73
<212>  PRT
<213>  Artificial Sequence

<220>
<223>  homolog of fragment of bovine prion

<220>
<221>  MISC_FEATURE
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<222>   (1)..(10)
<223>   where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
        idues


<220>
<221>   MISC_FEATURE
<222>   (50)..(59)
<223>   where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or
        Ser


<400>   25

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gln Pro His Gly Gly
1               5                   10                  15


Gly Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys Pro Ser
            20                  25                  30


Lys Pro Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala Ala Gly
        35                  40                  45


Ala Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser
    50                  55                  60


Arg Pro Leu Ile His Phe Gly Asn Asp
65                  70


<210>   26
<211>   136
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   homolog of fragment of bovine prion

<220>
<221>   MISC_FEATURE
<222>   (1)..(10)
<223>   where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
        idues


<220>
<221>   MISC_FEATURE
<222>   (50)..(122)
<223>   where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or
        Ser


<400>   26
```

```
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gln Pro His Gly Gly
1                   5                   10                  15

Gly Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys Pro Ser
            20                  25                  30

Lys Pro Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala Ala Gly
        35                  40                  45

Ala Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser
    50                  55                  60

Arg Pro Leu Ile His Phe Gly Asn Asp Gly Gln Pro His Gly Gly Gly
65                  70                  75                  80

Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys Pro Ser Lys
            85                  90                  95

Pro Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala Ala Gly Ala
        100                 105                 110

Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser Arg
    115                 120                 125

Pro Leu Ile His Phe Gly Asn Asp
    130                 135
```

<210> 27
<211> 73
<212> PRT
<213> Artificial Sequence

<220>
<223> homolog of fragment of bovine prion

<220>
<221> MISC_FEATURE
<222> (40)..(49)
<223> where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or Ser

<220>
<221> MISC_FEATURE
<222> (64)..(73)
<223> where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 residues

<400> 27

Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly Gly Thr His Gly
1   5   10   15

Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Val Ala
            20   25   30

Gly Ala Ala Ala Ala Gly Ala Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa
        35   40   45

Xaa Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe Gly Asn Asp Xaa
        50   55   60

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65   70

<210> 28
<211> 136
<212> PRT
<213> Artificial Sequence

<220>
<223> homolog of fragment of bovine prion

<220>
<221> MISC_FEATURE
<222> (40)..(112)
<223> where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or
      Ser

<220>
<221> MISC_FEATURE
<222> (127)..(136)
<223> where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
      idues

<400> 28

Gly Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly Gly Thr His Gly
1   5   10   15

Gln Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Val Ala
            20   25   30

Gly Ala Ala Ala Ala Gly Ala Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa

                        35   40   45

Xaa Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe Gly Asn Asp Gly
    50   55   60

Gln Pro His Gly Gly Gly Gly Trp Gly Gln Gly Gly Thr His Gly Gln
65   70   75   80

Trp Asn Lys Pro Ser Lys Pro Lys Thr Asn Met Lys His Val Ala Gly
                85   90   95

Ala Ala Ala Ala Gly Ala Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa
            100   105   110

Gly Ser Ala Met Ser Arg Pro Leu Ile His Phe Gly Asn Asp Xaa Xaa
            115   120   125

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
    130   135

<210>   29
<211>   83
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   homolog of fragment of bovine prion

<220>
<221>   MISC_FEATURE
<222>   (1)..(10)
<223>   where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
        idues

<220>
<221>   MISC_FEATURE
<222>   (50)..(59)
<223>   where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Ly, Gly, or
        Ser

<220>
<221>   MISC_FEATURE
<222>   (74)..(83)
<223>   where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
        idues

<400>   29

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gln Pro His Gly Gly
1   5   10   15

Gly Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys Pro Ser
            20   25   30

Lys Pro Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala Ala Gly
        35   40   45

Ala Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser
    50   55   60

Arg Pro Leu Ile His Phe Gly Asn Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa
65   70   75   80

Xaa Xaa Xaa

<210>   30
<211>   146
<212>   PRT
<213>   Artificial Sequence

<220>
<223>   homolog of fragment of bovine prion

<220>
<221>   MISC_FEATURE
<222>   (1)..(10)
<223>   where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
        idues

<220>
<221>   MISC_FEATURE
<222>   (50)..(122)
<223>   where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or
        Ser

<220>
<221>   MISC_FEATURE
<222>   (137)..(146)
<223>   where Xaa is an optional poly-Lys or poly-Asp segment of 4-10 res
        idues

<400>   30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gly Gln Pro His Gly Gly

34

```
1               5                  10                 15

Gly Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys Pro Ser
            20              25              30

Lys Pro Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala Ala Gly
            35              40              45

Ala Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser
    50              55              60

Arg Pro Leu Ile His Phe Gly Asn Asp Gly Gln Pro His Gly Gly Gly
65              70              75              80

Gly Trp Gly Gln Gly Gly Thr His Gly Gln Trp Asn Lys Pro Ser Lys
            85              90              95

Pro Lys Thr Asn Met Lys His Val Ala Gly Ala Ala Ala Ala Gly Ala
            100             105             110

Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa Gly Ser Ala Met Ser Arg
    115             120             125

Pro Leu Ile His Phe Gly Asn Asp Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
    130             135             140

Xaa Xaa
145
```

<210> 31
<211> 199
<212> PRT
<213> Escherichia coli

<400> 31

```
Phe Val Thr His Leu Asn Arg Asn Lys Thr Pro Ile His Glu Lys Val
1               5                  10                 15

Phe His Phe Asn Gln Glu Arg Glu Asp Gly Ile Ser Val Glu Val Ala
            20              25              30

Met Gln Trp Asn Asp Gly Phe Gln Glu Asn Ile Tyr Cys Phe Thr Asn
            35              40              45
```

35

```
Asn Ile Pro Gln Arg Asp Gly Gly Thr His Leu Ala Gly Phe Arg Gly
    50              55              60

Ala Leu Thr Arg Thr Leu Asn Asn Tyr Met Asp Lys Glu Gly Phe Ser
65              70              75              80

Lys Lys Ala Gln Ala Ala Thr Ser Gly Asp Asp Ala Arg Glu Gly Leu
            85              90              95

Thr Ala Val Val Ser Val Lys Val Pro Asp Pro Lys Phe Ser Ser Gln
            100             105             110

Thr Lys Asp Lys Leu Val Ser Ser Glu Val Lys Ser Ala Val Glu Ser
    115             120             125

Ala Met Asn Glu Lys Leu Ala Asp Phe Leu Ala Glu Asn Pro Ser Glu
    130             135             140

Ala Lys Asn Val Cys Ser Lys Ile Ile Asp Ala Ala Arg Ala Arg Glu
145             150             155             160

Ala Ala Arg Lys Ala Arg Glu Met Thr Arg Arg Lys Gly Ala Leu Asp
            165             170             175

Leu Ala Gly Leu Pro Gly Lys Leu Ala Asp Cys Gln Glu Lys Asp Pro
            180             185             190

Ala Leu Ser Glu Leu Tyr Ile
            195
```

<210> 32
<211> 10
<212> PRT
<213> Artificial Sequence

<220>
<223> homolog of fragment of human or bovine prion

<220>
<221> MISC_FEATURE
<222> (1)..(10)
<223> where Xaa is Val, Val, Tyr, Met, Leu, Pro, Asp, Glu, Lys, Gly, or
      Ser

<400> 32

```
Xaa Xaa Gly Gly Leu Gly Gly Xaa Xaa Xaa
1               5                   10
```